Aperture used was 3 inches: focal length 45 inches; power 80.

I first caught a view of the planet at about $2^h\ 5^m$, when it had advanced some 12″ of arc over the Sun's limb. At the moment of first internal contact the Sun was completely clouded, but I obtained a good view of the planet when its following limb at $2^h\ 25^m$ was about 10″ from that of the Sun. At this time *Venus* appeared slightly elliptical in a polar direction, and the "ligament" manifested itself at the time as a dusky, ill-defined, tremulous band intervening between the planet and the Sun's limb. The disk of *Venus* appeared of a very dark Indian-ink brown, and measured upwards of one inch in diameter on the screen. I did not observe any indications of an atmosphere, nor anything of the nature of a central spot of light.

From $2^h\ 26^m$ the Sun was overclouded for the rest of the afternoon.

1882, *Dec.* 8.

Note on Professor Newcomb's Remarks on the Windsor Observations of the Transit of Venus in 1874. By John Tebbutt.

Professor Newcomb, in his remarks (*R. A. S. Notices* for April 1882) on the Instructions of the Paris International Conference for observing the Transit of *Venus* in 1882 states, "that I failed to observe either contact in 1874 through waiting at ingress until almost every vestige of the ligament had disappeared, and at egress by endeavouring to catch its first formation." It is quite possible that Professor Newcomb's statements may to a certain extent be correct, but it is at all events certain that the errors of observation were not great, as the phenomena of the shadowy ligament extended over a very small interval of time. That the errors could not be so great as Professor Newcomb's remarks seem to suggest is conclusively shown by the general result arrived at by Lieut.-Colonel Tupman, in his paper on the Solar Parallax, in the *R. A. S. Notices* for June 1878. The residuals for the Windsor observations of internal contact at ingress and egress, after the rejection of certain observations from other stations, are $12^s{\cdot}1$ and $0^s{\cdot}7$ too late respectively. I do not think, however, that a perfectly satisfactory determination of the value of the Windsor observations can be arrived at till more accurate values are adopted for the longitudes of some of the stations. In the case of Sydney and Windsor I think there can be no doubt that the longitude requires a correction of about four and five seconds of time respectively. The value adopted for Windsor is that contained in the *Nautical Almanac*, which depends on the old and, I believe, erroneous longitude of the Sydney Observatory, combined with the telegraphic difference between the two stations. From a casual consideration of the question it seems probable that had the more correct longitude of Windsor (see *R. A. S.*

Notices, vol. xl. p. 440) been employed, the residuals of that place would have been small and numerically about equal, but affected with different signs, showing that the thread of light was very fine and of nearly the same breadth at both observed internal contacts. In conclusion I may remark that the definition was good at both contacts, and that the contacts themselves were observed under the same conditions as regard aperture and magnifying power.

Windsor, N. S. Wales:
1883, *Jan.* 23.

Observations of the Partial Solar Eclipse, 1882, *November* 10.

By John Tebbutt.

The weather was all that could be desired for the observation of this phenomenon, and the contacts were pretty well observed as follows:—

		d	h	m		
First contact	...	Nov. 10,	19	16	21·2	Local mean time.
Last contact	...	10,	21	47	57·2	

The instrument employed was the $4\frac{1}{2}$-inch Equatorial with the full aperture and a negative eyepiece magnifying 120 diameters, in combination with a diagonal prism and the necessary coloured shade. The instrumental conditions were precisely those under which the last Transit of *Mercury* was observed here. The definition was very fair, and the solar cusps were sharp throughout. The irregularities of the Moon's limb were also well seen, but I could not detect any portion of the limb off the Sun's disk. At $20^h\ 12^m\ 57^s{\cdot}5$ the Moon's limb made first contact with a roundish-black spot, and the last contact at total emersion was observed at $21^h\ 7^m\ 24^s{\cdot}8$. In addition to this isolated spot there was a large group of spots on the Sun's disk, and so conspicuous, indeed, was this group that it could be readily seen with a coloured glass without a telescope. One of the most interesting phenomena in connection with the eclipse was the behaviour of two black-bulb thermometers suspended vertically in free sunshine, and read off as far as practicable at intervals of five minutes. One of the instruments was *in vacuo* and the other in a glass globe containing air. The following table exhibits the variations of the readings:—